WHAT IS CLAIMED IS:

1. A method of providing a translucent ceramic body with increased in-line optical transmission comprising:

(a) densifying a ceramic body to form a substantially translucent ceramic body, the densifying process including heating the ceramic body under a pressure of at least 350 kg/sq.cm ; and

(b) physically contacting a major surface of the substantially translucent ceramic body with a molten inorganic flux, which includes an alkali metal borate capable of dissolving the ceramic, at elevated temperatures and for a time period sufficient to improve transmittance of the ceramic body.

2. The method of claim 1, wherein the ceramic body includes alumina.

3. The method of claim 1, wherein the step of densifying includes:
heating the ceramic body in an inert atmosphere at a temperature of from about 1600°C to 1900°C.

4. The method of claim 2, wherein the step of densifying includes:
during heating, subjecting ceramic body to a pressure of at least about 700 kg/sq.cm.

5. The method of claim 4, wherein the step of densifying includes subjecting the ceramic body to a pressure of up to about 2100 kg/ sq.cm.

6. The method of claim 1, wherein the step of physically contacting includes immersing the ceramic body in a molten flux bath.

7. The method of claim 6, wherein the step of physically contacting includes immersing the body in a molten flux bath in an oxidizing atmosphere.

8. The method of claim 6, wherein the temperature of the molten flux bath is less than about 1000°C.

9. The method of claim 1, wherein the step of physically contacting includes coating the ceramic body with a material for forming the flux and heating the coated ceramic body to a sufficient temperature for melting the material.

10. The method of claim 1, further including after the step of contacting:

removing flux residue from the major surface by dissolving the flux with an acid solution.

11. The method of claim 1, wherein the alkali metal borate is of the general formula $(M_2O)_n$ $(B_2O_3)_m$, where M includes at least one of Na and K and where n and m are integers, and combinations thereof.

12. The method of claim 11, wherein n : m is in the range of from 1:2 to 1:4.

13. The method of claim 1, wherein the ceramic body is an arc tube.

14. An optically transparent densified, sintered polycrystalline ceramic body having a major surface treated with a process comprising:

heating a ceramic body in an inert atmosphere a pressure of at least 350 kg/sq.cm for a sufficient time to form a substantially translucent polycrystalline ceramic body; and

physically contacting a major surface of the substantially translucent ceramic body with a molten inorganic flux which includes an alkali metal borate capable of dissolving the ceramic at elevated temperatures and for a time period sufficient to improve light transmittance by the ceramic body.

15. The optically transparent densified, sintered polycrystalline ceramic body of claim 14, wherein the step of heating includes heating the ceramic body to a temperature of about 1600°C to 1900°C.

16. The optically transparent densified, sintered polycrystalline ceramic body of claim 14, wherein the ceramic includes alumina.

17. The optically transparent sintered polycrystalline alumina body of claim 16, wherein the ceramic body comprises high purity alumina containing of up to about 0.5 weight percent magnesia.

18. The optically transparent sintered polycrystalline alumina body of claim 17, wherein the magnesia is present at a concentration of 400-1500 ppm.

19. The optically transparent densified, sintered polycrystalline ceramic body of claim 12, wherein the body comprises an arctube.

20. A high intensity electric discharge lamp comprising:

a discharge vessel which defines a chamber, the discharge vessel being constructed from a polycrystalline material which has been densified by applying sufficient pressure and temperature to reduce pores in the vessel and polished by physically contacting a major surface of the substantially translucent vessel with a molten inorganic flux at elevated temperatures and for a time period sufficient to reduce unevenness in the major surface;

electrodes sealed into ends of the chamber; and

a fill sealed within the chamber, the fill including a ionizable medium for initiating and sustaining a discharge.